



the **RARA RAG**

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ROCHESTER AMATEUR RADIO ASSOCIATION, INC.

VOL. 56

FEBRUARY 2004

NO.6

DIRECTION-FINDING TECHNIQUES

Brad Armstrong W1YX

Thanks to all those who came out to the January general meeting on the day after New Year's Day! I was pleased to see such fine attendance on a holiday weekend. Kevin Carey's presentation on longwave was especially interesting. I learned quite a bit about a portion of the spectrum I knew little about, and I heard from many others that they did as well.

We are in for a real treat at February's meeting, as the presenter will be David Shields of Rochester Gas & Electric. He has offered to speak on a variety of subjects related to the quality of power distribution systems.

He will educate us on how the company uses direction-finding techniques to locate faults in their equipment and will be talking about some of the tools used to track down and confirm these issues including ultrasound, infrared,



and their brand new corona (ultra-violet) camera. He expects to be able to bring along the ultrasound and corona equipment to show us up close – the IR equipment is attached to a truck, so that would be a bit difficult to carry into the meeting hall. David also will tell us what to look for as far as power quality issues in our homes. He will be teaching us the proper way to set up surge suppression and UPS systems and how to deal with RFI issues as well.

One other note here: I did ask if he was familiar with Broadband over Power Line and the issues surrounding it. This subject is of great importance to the amateur community at this time, so I knew that it would certainly be brought up at the meeting. He said that he was not familiar with BPL yet, but that he would see what research he could do to be up on this technology for the meeting.

David has expressed a strong interest in building a better working relationship between hams in our community and RG&E. This is a great opportunity for us to join him in this effort. He also told me that he enjoys talking tech, so bring your thinking caps to this one, gentleman!

In his 30 years with RG&E David has worked as a Relay Engineer, a Transmission and Disturbance Planning Engineer, and in his current position as Senior Power Line Quality Engineer. He holds an EE from the University of Rochester has taught Electric Utility Engineering there as well as teaching Protective Relaying to the power dispatchers at the New York Power Pool. He is a member of IEEE and obtained an IEEE Region 1 Award for Technical Applications in Electric Power Quality Analysis in 1992.



CONTINUED PAGE 5

RaRa

MEETING

February 6, 2004

8:00 PM

**HENRIETTA FIRE HALL
3129 E. HENRIETTA RD.**

**DIRECTION-FINDING
TECHNIQUES**

Presented by

David Shields of RG&E

the RARA RAG

Published by
ROCHESTER AMATEUR RADIO ASSOCIATION, INC.

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RARA RAG 2

PREZ SEZ....

George Platteter AA2FO

It's the dawn of a new year and already events have begun are beginning to unfold.

As a starter the Red Cross placed To get things really into fun gear, the Emergency Group was placed on alert for three days. They by the Red Cross. The Red Cross did not give a reason, but a little imagination, in the form of "colors", might answer the question. When the alert was put into effect, thirty-six hams responded. with various times when available. Those responding monitored the "88" repeater for further instructions. Countless other hams were also standing by in case something really happened. The Needless to say, the Red Cross was impressed once again with the ability of the ham community to respond in such a positive fashion.

To further hone up on operating skills, Greg Michels, KC2GXV, put together an instruction informative session to further acquaint those interested within the fine points of emergency communications. The session It is one of many more to come. It The session was held on January 15, probably the coldest night of the year so far. Despite With a wind chill of minus 31 degrees, more that twenty hams braved the weather to attend. As one of the participants put it- "walking from the parking lot to the building was almost bearable (down wind), it was returning to the lot after the meeting (up wind) that really got to you.

It was really great to see various groups within the organization work together toward a common goal. I'm speaking of the class session people and Public Relations (I'd like to call them Media Communication) people. A great effort was put forth by Peter Fournia, W2SKY, and those who aided him, in publicizing the up coming license classes via the local media. In the past, these efforts have contributed greatly to the enrollment and success of the classes. Ray Pickens, W2MYG, conducts the classes.

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CORRECTED ARTICLE

PREZ SEZ...

George Platteter AA2F0

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SCHOLARSHIP AVAILABLE TO MEMBERS

Dick Goslee K2VCZ

RaRa is pleased to announce that the fourth annual Scholarship will be available to a student attending College. The "Rochester Amateur Radio Association Memorial Scholarship" has been established with generous donations made in memory of A. Leland Zwack, W2WPF, William Buchan, W2OMV and William Resch, K4VOS. The scholarship is available to any licensed Amateur Radio operator who is or will be pursuing any degree of Associate level or higher in any accredited school beyond high school. The individual must be a member of RaRa and a resident of New York State. The scholarship is for one individual for one year, but the recipient may reapply for subsequent years. John McIntyre, KC2JSJ was the 2003 winner of the second Memorial Scholarship which was presented at the Hamfest Banquet last June.

Applications are due no later than April 15th. The RaRa Board of Directors and Scholarship Committee will make a final decision by May 15th of each year. The actual award will be presented at the annual RaRa Hamfest Banquet held shortly there after. Applications for the scholarship may be obtained at RaRa general meetings, by mail at P.O. Box 93333, Rochester, NY 14692-8333 or by calling the RaRa Hotline Phone at 442-0587

-0587. Additional information and a copy of the application is available on the Rochester Amateur Radio Association web site at <http://www.rochesterham.org/>, or from one of the officers.

Antique Wireless Association News

Ed Gable K2MP/W2AN

I thought I'd take this opportunity to introduce many of the new RaRa people to a unique resource here in the greater Rochester area. That is the facilities of the long titled *AWA Electronic Communication Museum* located in Bloomfield, New York. Started by members of the *Antique Wireless Association (AWA)* the museum is celebrating over 50 years of existence and is currently, with 3500 members, the world's largest organization of radio historians and enthusiasts. The museum's theme is electronic communications and thus covers telegraph, wireless, telephone, radio/TV and into modern communications. The museum collection is world class and includes the world's first cellular telephone, the Bell Labs proto-type transistor radio, the first transistorized transmitter, original equipment used by Edwin Howard Armstrong in developing his invention of regeneration, superheterodyne techniques and FM. The list goes on and one. The museum is proud to be a New York State chartered museum and enjoys IRS 501(c) 3 status. Setting the AWA apart from many collectors groups is the fact that goal and purpose is that of a true historical organization and research center. The AWA is pleased to publish quarterly the *Old Timers Bulletin* and annually the *AWA Review* which is full of original research papers. Like most all museums the AWA is run by a group of dedicated volunteers, many of which are hams and still many are RaRa Members. The museum is closed for the season but opens in 2004 on Saturday, May 1st. Admission is free. Please make it a point to plan a visit this year, you will be well rewarded. See the AWA web site at www.antiquewireless.org for details. Also mark your calendars now and plan to attend the AWA Spring Meet on May 1, 2004. This annual event is where AWA members and the public gather to operate a large radio Flea Market, radio auctions, demonstrations and much more. Everyone is welcome. More information will follow as we get closer to the date. Questions can be e-mailed To the museum Curator, Ed Gable K2MP, at k2mp@arrl.net.

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RaRa Rag 20 Years Ago, February 1984

Ed Gable K2MP

At this time meetings were being held at the 40/8 Club on University Avenue. Although the meeting program had not been announced yet, there was another popular RaRa event this month, the Valentine Dinner Party, this year at the Holiday Inn – Airport, with entertainment by Jerry Argetsinger's Magic Act. The FCC just announced that starting immediately FCC Ham licenses will be granted for a ten year period instead of the previous 5 years. Writing for the RRRA, Ron Jakubowski, K2RJ, gave an update on the *fuzz-buzz* system upgrades on the 28/88 repeater. This pre-911 system allowed amateurs to contact county emergency dispatchers directly via 2 meters, a very advanced service of this period. Also advanced and timely was the work of a Webster company called *Radionics* that was developing digital speech techniques. *Radionics'* Fred Cupp, W2DUC, reported on a test program where local Amateurs can get a free pass code number for access into a new concept of computerized message handling, the TEL TRAK 2 System. You could enter a code, tell the system if you were in, or out, or available and enter a telephone where you could be reach or leave a message. This issue listed twenty-five amateurs currently testing the system, I was number 814. At this time there was an interesting column in the *Rag* called the *Cop's Column* by Howie Davies, N2CUN, of the Rochester Police Department. Howie wrote mostly non-ham radio subject lines and this month how to drive on ice and snow. Writing for the VHF Group was Ed Mahar, WB2ZJY, who told that the group's planners were discussing their 35 year anniversary, a joint auction with the RRRA, a group picnic and more. Sadly, Ted Kimmerly K2SQH and Carlton Bonyton WA2IJC were reported as silent keys. There was only one photo in this issue, that of Jim Collinsworth, N2JC, working the Palmyra Caneatown Days. *Harvey's Ham* of Caledonia, selling Ten-Tec and Dentron, remains a long time advertiser. From the Want-Ads you could buy a complete Collins S-Line and a 30L1 from Ollie, K2BBK.

SUPPORT YOUR LOCAL REPEATERS

RARA RAG 4

RaRa Amateur Radio License Testing

All Elements Needed To Complete
a License Class

Saturday February 21, 2004

Contact Cheryl Joyce AB2NU
For any special needs (585-533-9252)

Registration - 8:30 a.m.

Testing - 9:00 AM

Room 2150, Building 76

(Park in Lot F)

Rochester Institute of Technology

1 Lomb Memorial Drive

Rochester, NY 14623

FOR SALE:

I have an Ameritron AL-811H HF Power linear Amplifier I would like to sell. It may be seen at my QTH if any one is interested. A fair price (at least the value of the four 811A tubes) is the asking price. I have logged five times it was used and to say the least it is in mint condition. Call Jim at 585-321-9757 for more information.

FOR SALE: Serious HF Yagi. Mosley PRO-95, 3 inch boom, 36 feet in Length, 9 elements, five bands 20 – 10 meters, 5 kW rating, 150 mph design. Current model and in catalog at >\$2000. Disassembled and stored in Greece. Like new condition. Seller anxious but not unaware of value. Make offer to Ed Gable, K2MP, (585) 392-3088, or k2mp@arrl.net



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FOR SALE: T-50H Alumna heavy duty Tower. 50 feet tall, rated for 100 Mile winds and tilts to work on the antenna. Retail for \$2,500. Asking \$2,250. Detailed technical specs at <http://www.alumatower.com>. Also, Yaesu G-1000SDX heavy duty antenna rotor. Retail for \$469 + S&H. Asking \$400. Buy both for \$2,600!!! . Call (585) 746-5118".

FOR SALE: Brother, Model HL-1440 Laser Printer, brand new. 1200 x 600 dpi; 24 fonts; prints any custom Size from 2 3/4" x 5" to 9" x 16". Feeder holds up to 250 sheets. Includes unused Toner Cartridge in sealed Carton and drivers... \$145.00 or B/O for everything. Irv Goodman, AF2K, 671-4430.

CONTINUED FROM DIRECTION PAGE 1

My hope for this year is to find as many ways for folks to get involved in local amateur activities as I can and learn a little along the way. Slots for the rest of the season are filled at this time; however if you have a program idea, please contact me regarding it anyway. I still may be able to find space for a topic that can be covered in half an hour or less, and I am keeping a list of ideas to help our next VP. I also read that Ed Gable is looking for photos and other historical material regarding the Club. Please take a minute to see what you might have to contribute, as I have every reason to believe it will be well cared for and put to good use! Lastly, don't forget to set aside Saturday, June 19th to attend the annual RaRa picnic in Ellison Park.

RaRa License Class

Ray Pickens WA2MYG

We started last semester (September 8th – November 24th) with 20 combined course students. Within the first three weeks 3 more students joined the Class, by the 9th week there were 4 dropouts putting us back to 19 students. On But on the bright side we had 7 upgrades, 3 Technicians/Code, and 3 new Technicians

A new License Class will start February 16, 2004 running thru May 3, 2004 with all classes of Amateur Licenses offered. with class License Examinations to be held taken at the scheduled RaRa VE session 08:30 May 15, 2004, building 76 room 1155. It is my hope that this semester will at the very least equal or if not surpass the number of upgrades and new licensees .

KODAK A.R.C VE TESTING (W5YI VEC)

Ray Pickens WA2MYG (Contact Person)

As of this writing the Kodak VE testing team will be operating On a new schedule every 4 months, the next session will be on April 1, 2004 17:30 Building 28 (Theater on the Ridge) at Kodak Park. This decision was arrived at due to very poor showing of Applicants in recent months. If there is a need for a group of Applicants such as a class or club to have a special VE session Please notify me wa2myg@arrl.net or by phone (585)334-8724

NEXT RAG DEADLINE 02/16/2004

FOR SALE: com 2m handheld radios and accessories: 2-p2at, 1-bp112, 1-bp114, 3-bp110, 1-cp12, 1-hm46, 1-hm46l, 2-bc74a, 1-hm9, 1-bc80 (desk charger) 2-leather carrying cases, original boxes and schematics. A Westcom rs-7a 7a regulated power supply and an RF Concepts rfc2-23 (2 watts in and 30 watts out) Preamplifier. Asking \$450.00. Mark, n2apd, 585-381-0437

SILENT KEY

Ronald A. Alloco N2HYU 11/01/2003

RARA RAG 5

FEMA to FCC: BPL will "Severely Impair" Mission- Essential HF Operations

(From the ARRL Web Site)

NEWINGTON, CT, Dec 8, 2003-- Expressing "grave concerns" about likely interference from unlicensed Broadband over Power Line (BPL) systems, the Federal Emergency Management Agency (FEMA) has told the FCC that BPL could "severely impair FEMA's mission-essential HF radio operations in areas serviced by BPL technology." FEMA filed comments December 4 in response to last April's FCC BPL Notice of Inquiry, ET Docket 03-104. FEMA expressed primary concern over BPL's potential impact on the FEMA National Radio System (FNARS), which operates on HF and serves as the agency's primary command and control backup medium as part of the Federal Response Plan.

"FEMA has concluded that introduction of unwanted interference from the implementation of BPL technology into the high frequency radio spectrum will result in significant detriment to the operation of FEMA radio systems such as FNARS," FEMA's comments assert. "FNARS radio operators normally conduct communications with signals that are barely above the ambient noise levels." FEMA further noted that FNARS HF stations typically are in residential areas of the sort that BPL--a form of power line carrier (PLC) technology--might serve.

BPL also could render such "essential communications services" as the Radio Amateur Civil Emergency Service (RACES), the Military Affiliate Radio System (MARS) and the Civil Air Patrol (CAP) useless, FEMA said. FEMA and ARRL last year signed a Memorandum of Understanding that focuses on how Amateur Radio personnel may coordinate with the agency to support emergency communications functions.

Calling the HF spectrum "an invaluable and irreplaceable public safety resource," FEMA said there's no current alternative to HF in terms of meeting national security and emergency preparedness requirements at the national, state and local levels. The agency recommended beefing up the FCC's Part 15 rules to ensure no increase in interference levels to

existing FCC or NTIA-licensed communication systems, "because any noise increase inevitably would diminish the ability to maintain essential communications," FEMA said, and would "directly impair the safety of life and property."

The BPL interference situation is reciprocal, FEMA noted, citing "Interference to PLC systems from Amateur Radio Operation". That paper points out that Amateur Radio transmitters likely would interfere with BPL systems. BPL users likewise would experience service interruptions when its transmitters "overpower the signal levels expected by BPL modems," F E M A p r e d i c t e d . FCC adoption of proposals to encourage widespread development and deployment of BPL also could result in consumer confusion regarding who would resolve interference issues and how. FEMA said it believes licensed radio services "will be perceived by consumers as responsible for the interference, since most consumers do not understand that their unlicensed Part 15 devices 'must accept any interference received, including interference that may cause undesired operation.'"

"The purported benefits of BPL in terms of expanded services in certain communications sectors do not appear to outweigh the benefit to the overall public of HF radio capability as presently used by government, broadcasting and public safety users," FEMA concluded.

FEMA Chief Information Officer Barry C. West, who filed the comments on the agency's behalf, characterized the issues it raises as being "of great importance to the national public safety." Because FEMA now is part of the Department of Homeland Security, its perspectives on BPL could carry substantial weight at the FCC, which may issue a Notice of Proposed Rule Making as early as February.

The ARRL announced last week that it plans to complete an independent BPL engineering study within a couple of months. The study will explore how BPL might affect HF and low-VHF amateur operation as well as how Amateur Radio operation could affect BPL systems.

146.28/88 K2RRA/R

The main Westfall Rd. is back on the air with a new Hustler G7 replacing the defective 4 pole antenna. Next RRRA meeting 02/20/04 20:00 In the Pittsford Town Hall basement

SB QST @ ARL \$ARLB003

ARLB003 ARRL to Propose New Entry-Level License, Code-Free HF Access

LATE BRAKING NEWS BULLETIN

ARLB003 ARRL to Propose New Entry-Level License, Code-Free HF Access

The ARRL will ask the FCC to create a new entry-level Amateur Radio license that would include HF phone privileges without requiring a Morse code test. The League also will propose consolidating all current licensees into three classes, retaining the Element 1 Morse requirement--now 5 WPM--only for the highest class. The ARRL Board of Directors overwhelmingly approved the plan January 16 during its Annual Meeting in Windsor, Connecticut. The proposals--developed by the ARRL Executive Committee following a Board instruction last July--are in response to changes made in Article 25 of the international Radio Regulations at World Radio communication Conference 2003 (WRC-03). They would continue a process of streamlining the amateur licensing structure that the FCC began more than five years ago but left unfinished in the Amateur Service license restructuring Report and Order (WT 98-143) that went into effect April 15, 2000.

"Change in the Amateur Radio Service in the US, especially license requirements and even more so when Morse is involved, has always been emotional," said ARRL First Vice President Joel Harrison, W5ZN, in presenting the Executive Committee's recommendations. "In fact, without a doubt, Morse is Amateur Radio's 'religious debate.'"

The entry-level license class--being called "Novice" for now--would require a 25-question written exam. It would offer limited HF CW/data and phone/image privileges on 80, 40, 15 and 10 meters as well as VHF and UHF privileges on 6 and 2 meters and on 222-225 and 430-450 MHz. Power output would be restricted to 100 W on 80, 40, and 15 meters and to 50 W on 10 meters and up.

"The Board sought to achieve balance in giving new Novice licensees the opportunity to sample a wider range of Amateur Radio activity than is available to current Technicians while retaining a motivation to upgrade," said ARRL CEO David Sumner, K1ZZ. Under the ARRL plan, current Novice licensees--now the

smallest and least active group of radio amateurs--would be grandfathered to the new entry-level class without further testing.

The middle group of licensees--Technician, Tech Plus (Technician with Element 1 credit) and General--would be merged into a new General license that also would not require a Morse examination. Current Technician and Tech Plus license holders automatically would gain current General class privileges without additional testing. The current Element 3 General examination would remain in place for new applicants.

The Board indicated that it saw no compelling reason to change the Amateur Extra class license requirements. The ARRL plan calls on the FCC to combine the current Advanced and Amateur Extra class licensees into Amateur Extra, because the technical level of the exams passed by these licensees is very similar. New applicants for Extra would have to pass a 5 WPM Morse code examination, but the written exam would stay the same. Sumner said the Board felt that the highest level of accomplishment should include basic Morse capability. Current Novice, Tech Plus and General Licensees would receive lifetime 5 WPM Morse credit.

"This structure provides a true entry-level license with HF privileges to promote growth in the Amateur Service," Harrison said.

Among other advantages, Sumner said the plan would allow new Novices to participate in HF SSB emergency nets on 75 and 40 meters as well as on the top 100 kHz of 15 meters. The new license also could get another name, Sumner said. "We're trying to recapture the magic of the old Novice license, but in a manner that's appropriate for the 21st century."

The overall proposed ARRL license restructuring plan would more smoothly integrate HF spectrum privileges across the three license classes and would incorporate the "Novice refarming" plan the League put forth nearly two years ago in a Petition for Rule Making (RM-10413). The FCC has not yet acted on the ARRL plan, which would alter current HF subbands.

The ARRL license restructuring design calls for no changes in privileges for Extra and General class licensees on 160, 60, 30, 20, 17 or 12 meters. Novice licensees would have no access to those bands.

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